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OUT ON A WINTER'S DAY.

What is our little girl in the picture doing out in such a storm as that shown in the engraving? Her umbrella is a mountain of snow that must be growing heavier every minute from the great flakes that the wind is driving upon it. But she does not seem to mind it a bit as she boldly trudges along and is laughing to herself, as if it were the best fun imaginable. What can she be doing? Is she going to pay a visit to some friend who lives on the other side of the wood? She would make a pleasant visitor, full of ruddy health and strength, not like those girls who never can go out without catching cold, and who prefer the gas and hot air from their stoves to the pure fresh breeze which is sometimes laden with snow and frost. But well wrapped up by her mother's careful hand, she defies both these, and is sallying forth—to where? Now that is the question. Is she going to school? She does not seem to have any books with her; but she looks like one of those pleasant school-girls to be seen in all parts of Canada and the United States. Perhaps she is going to Sunday-school. Those inattentive boys behind her must be her brothers or they would be assisting to carry her heavy umbrella. They may have her books. Perhaps she is going around to get some subscribers for the MESSENGER. She looks just like one who would engage in such work and do it well. There are few who could resist her pleasant smile and sweet words of recommendation. If that is the case we hope that she will not have to face that storm on her return. Just now it only assists her along in her work. Happy little girl, she must be when even the storms befriend her! Perhaps she is going shopping; perhaps going to a party; perhaps on the way to church; perhaps just out for a frolic. Whatever it is, she is enjoying herself as she follows the road through the wood. May it be as pleasant all through life. We do not confine this wish to our friend in the picture, but to all the readers of the MESSENGER, many though they may be. Some of them learned to read from the MESSENGER pages, and have read them ever since with increased pleasure. Can we do aught but wish *them* a "Happy New Year?" Others have become its readers later. These have each number learned to like it more and more. These we must wish a "Happy New Year." Some see it now and again—we cannot pass them by, and hope that to one and all of America's people, and those of all the world, the year 1879 may be one of happiness and prosperity. It has given us great pleasure in working for our readers young and old during the year 1878; we hope that this pleasure will be enhanced in 1879, now begun, and that instead of having fifty thousand subscribers or two hundred and fifty thousand readers to work for, we will have a much larger number, who will also work that the MESSENGER may be a messenger to their friends as well as to themselves. Once again we wish you all a "Happy and Prosperous New Year."

OUT ON A WINTER'S DAY.

1878 AND 1879.

Old 1878 has passed away, with his frosty hair and icy breath, and young 1879 has been born with the atmosphere of the dead year around him. But soon Spring will be here, and then Summer, Autumn, and Winter; and 1879, when its length of days has come, will die too. While we cannot be sure that the whole year will be ours, we may make preparations for it; and it would be well that they should be for a year of useful work. Very much may be done in a year when plans are judiciously laid. Every day adds to the store of knowledge and to the capacity for usefulness, and day by day the character should grow stronger and the lives purer. But the foundation must be good. He who builds on a solid foundation has the satisfaction of seeing each stone add to the height and beauty of the structure; he who builds on a bog must not be surprised to see stone after stone sink out of sight from its own weight. The best foundation for a good and useful life is Christ our Saviour, the Rock of Ages, he who is the same yesterday, to-day and forever.

"Then they that feared the Lord spake often one to another: And the Lord hearkened, and heard it, and a book of remembrance was written before him for them that feared the Lord, and that thought upon his name."

Temperance Department.

THE DRAG OF THE UNDERTOW.

BY T. S. ARTHUR.

Frank Medairy had a dull headache. He had received a case of "Roederer's Imperial" from the city the day before, and he and his friends had made a night of it. Hence the headache and general out-of-sorts feeling in which he comes before the reader.

A young lawyer of more than ordinary promise, Medairy had already made a name in consequence of his successful management of two or three cases, which, from their peculiar nature, attracted considerable public attention; and was looked upon as one of the rising men at the bar.

"I don't like this," he said to himself, on seeing his hand shake a little as he raised a cup of coffee to his lips, and tasted the unpalatable beverage. It was nearly ten o'clock, and the "hotel coffee" had not improved much since the eight o'clock breakfast. "These champagne suppers play the mischief with a fellow's nerves."

He tried to eat, but his palate found no pleasure in the food that was set before him. He must get toned up before he was fit for anything. So he left the table and went to the bar. A nip of brandy did the work.

"That's your sort," he said, with inward satisfaction, as he felt the fine exhilaration creeping over his nerves, and the dull aching in his left temple begin to subside. "Nothing like a little good brandy. 'Richard is himself again!'"

At the billiard room he met one or two friends. After a few games they went to the bar for drinks, drawn thither by the gravitation of an appetite which was beginning to act with a steady but unregarded force.

"Have you seen anything of Bradford this morning?" asked Medairy, addressing one of his companions, whose name was Henderson.

"No; I called at Congress Hall, but he hadn't put in an appearance yet."

"His head isn't as strong as it might be."

The other did not reply.

"I'm a little afraid of Bradford," remarked Medairy, in a serious tone of voice.

"On what account?" Henderson lifted his eyebrows slightly.

"A man should know himself—just how much he can bear."

"Yes, that's so." But there was no heartiness in the response.

"What's the matter Dick?" Medairy grasped his friend's arm and shook him playfully. "You look as serious as old Judge Garland in a murder case."

"Do I?" The young man forced a laugh; but it died in a quick silence.

"I'm afraid champagne suppers don't agree with you."

"Why not?" Henderson betrayed a little annoyance.

"You're so dull and moody next morning."

"Am I?" He smiled and made an effort to rally himself.

"Speaking of Bradford," said Medairy, "do you know, I feel concerned about him. He's a splendid fellow and full of promise; but he has no head for champagne."

"As you remarked, a man should know himself just what he can bear," said the third member of the party, a young man named Milwood, who had not before spoken. "This is Braford's trouble, I'm afraid. And if he doesn't take care, the undertow will catch him."

At this speech, a dead silence fell upon the group. Henderson and Medairy looked at each other, and then dropped their eyes to the ground. Each saw a startled expression in the other's face. The "undertow!" Its application was too apparent not to be understood. They both felt it more than once.

"The tide is coming up, and there's going to be a splendid surf," said one of the young men, as they were strolling down to the beach, that was now gay with promenade and bathing costumes.

"Who's going in?" asked Henderson.

"I am," replied Medairy, as he removed his hat and let the cool sea-breeze that was coming in stiffly strike on his heated forehead. "A dip in the ocean gives me new life. It refreshes me like wine."

"And like wine it has an undertow," said Milwood; "and both are treacherous."

To this remark neither Medairy or Henderson made any reply; the former separating a few moments afterwards from his companions and going to one of the bathing-houses.

The day was brilliant, the water warm, the sea-breeze fresh, and the tide came rolling in with its great waves that broke and seethed along the shore. Hundreds of bathers were gaily disporting themselves. The scene was full of excitement and exhilaration. Medairy in his bathing-dress walked slowly across the beach, his manner that of one thoughtful or depressed.

The fact was, the remark of Milwood about the undertow had, for some reason, taken an unpleasant hold of him. Twice during his visit to the seaside this season he had, while bathing, been nearly dragged from his feet by the under current, and the danger was magnifying itself in his thoughts. A resolution to be on guard would have proved sufficient to remove the concern that was troubling him, if it had not been that the fear of another and more dangerous undertow had found a lodgment in his mind—a fear that he was trying to shake off; but the more he tried the more closely it clung, and the more it magnified itself. He paused as his feet touched the water, and an inflowing wave lifted itself halfway up to his knees. But the returning drift was scarcely perceived, and he moved forward until he reached the line where the surf combed and broke.

As wave after wave struck and went over him, Medairy felt the old life and exhilaration coming back, and he abandoned himself to the excitement of the hour. It was not long before he found himself a little beyond the breakers; but being a good swimmer, a few strokes brought him nearer shore, and within the line of safety. He felt such a vigor in his arms—such physical power and force—such pride in his strength and manhood, that he sent a shout of pleasure! These were for weaker men! So, disporting now amid the breakers, and now venturing beyond them, Medairy spent nearly half-an-hour, sustained more by the stimulation of excitement than by normal strength.

Suddenly, as he was struggling in a surf that broke unexpectedly over him, while further from the shore than any of the rest of the bathers had ventured, he felt his strength depart, and at the same moment the reflex movement of the undertow struck him with unusual force, and bore him out from the land. By the time he was able to recover a little self-possession, to get the water out of his eyes and mouth, and to bring into action his skill as a swimmer, he found himself drifting steadily from the shore, and unable to make any head against the outmoving current. He threw up his hands in sign of distress, and called loudly for help; but so long a time passed before his danger became apparent, or the life-boat could reach him, that he lost consciousness, and sank twice below the surface. As his white face came gleaming up through the dark water a second time, a strong hand grasped him. But life was apparently extinct.

"It was that cursed, treacherous undertow!"

Medairy's three young friends, Henderson, Bradford, and Milwood, were seated around his bed, discussing the accident and its well-nigh fatal termination. It was Milwood who made the remark.

"Cursed and treacherous! You may well say so," answered Medairy, whose memory held a vivid impression of that brief struggle in the surf when the breakers threw him from his feet, and he found himself helpless in the grasp of the undertow, which seemed to spring from below, mercilessly in the moment of his weakness. "You see," he added, "I stayed in too long. I ought to have known that it was only the excitement and exhilaration of the bathing, and not my reserve of strength, that was keeping me up, and that they could not last for ever."

"There is," said Milwood, speaking with great sobriety of manner, "an undertow more fatal and treacherous than the one which came so near dragging our friend Medairy to a watery grave. Some of us have felt it; I for one; and it has come near tripping me on more than one occasion. To-day I have strength to stand against it. But is there not some of us who remain too long amid the rush and excitement of the breakers, that we fail in some stronger sweep of the undertow, and that I may float out seaward, helpless, and drown? Such things happen every day; and we know it. There is in every glass of champagne, or brandy, or beer that we take an undertow as surely as in the wave that strikes the shore and draws itself back into the sea. Yes, we know it, friends—all of us; for we have indulged in too many champagne-suppers, and been to too many wine-parties in the last year or two, not to have had good opportunities for discovering the fact. And besides, we see almost daily one and another drifting out from the shore and drowning, while we stand looking on unable to rescue. A thousand are lost every year in the drag of this undertow to one in that from which Medairy has just escaped. There, I've said my say, and you must make the most of it. If the other side wants to speak, the floor is vacant. I'll listen and weigh the arguments."

But no one answered him. Each felt the force of his utterance; and with each was a solemn sense of danger.

"I think," said Medairy, turning to Henderson, and speaking in a lighter tone, yet still seriously, "that I shall have to beg off from your champagne supper to-morrow night. I want to study up this undertow business. It hasn't a good look."

"All right; I'll excuse you. And what's more, if the rest don't care, I'll telegraph Steele not to send the pipe of Heidseick I wrote for yesterday. I don't like the idea of that cursed undertow of Milwood's. Never thought of it before. And, to tell the truth, it has given me several warning pulls in the last few months."

There was present the young man Bradford, referred to in the beginning. He had not spoken during this conversation. Of all who had enjoyed Medairy's supper on the night before, he had indulged in the largest excess, and did not really know when or how he reached his room at the hotel. It was not the first time that wine had been his mocker; nor the first time a morning's shame and repentance followed a night's debauch.

"Telegraph!" he ejaculated, as Henderson ceased speaking, and with an emphasis that drew all eyes upon him. There was no mistaking the signs in his face. He had been in the grip of the undertow as surely as his friend who lay weak and exhausted upon the bed, and was in almost as much danger of drifting out to sea and drowning as this friend had been a few hours before. His sense of peril was so great that he felt a shiver run along his nerves.

"Then we're all agreed," said Henderson, rising. "I'll go at once and telegraph Steele not to send the champagne. In the meantime you can study up the undertow question, and let me know the result when I come back."

What the conclusion was we are not informed; but it will do the reader no harm to study up the question for himself; and so in closing we submit it for his careful consideration—only remarking that the undertow of an indulged appetite sets harder against a man than anything else, and comes, sooner or later, to act with an almost resistless force.—*Selected.*

TWO PICTURES; OR, LICENSE AND NO LICENSE.

BY B. L.

In Trimble County, Kentucky, Judge Bartlett, some time ago, refused to license any one to sell intoxicating drinks in the county, and though there was a loud cry of opposition and remonstrance, he stood firm to the decision, resolved that through his agency no more whiskey-dealers should be allowed to work ruin to themselves, to their families, and to the morals of the county; and what is the consequence? To-day, says the *National Prohibitionist*, there is not a criminal case on the docket of the county, not a criminal in the jail, not a pauper in the county to be supported, and not a licensed bar-room; and at the last county court, though the county town was crowded with people, not a drunken man was seen in the place; good order and quiet prevailed, and no husband or father went home to his family intoxicated, to abuse his wife and children.

And now look at the other picture. Anderson County, says the same authority, continues to grant licenses to the whiskey-shops and taverns. And what is the consequence there? In one week two murders were reported, and numerous arrests for violence and disorder. Jefferson County licenses; and it has over twenty murders, or attempts to murder, in a year; and five hundred and thirty-seven arrests in one city in a single month. Pulaski County licenses; and it has ten whiskey murders in a few months. Scott County licenses; and its docket is crowded with offences and crimes. And so in every county of the State where licenses are granted: murders, and quarrels, and violence, and abuse of wives and children, are reported abundantly; and the greater part of all the county expenses is found to come from the courts and jails and prisons and officers rendered necessary by the offences and crimes committed by men under the influence of intoxicating drinks!

And now, which of the two pictures is the fairest? Which of the two systems is the best? It would seem as if every one must draw but one and the same conclusion, that to license the grogshop, is to cause expense; incite to outrages and crimes; waste property; lead to cruelty to wives and children; build jails and fill them; and spread sorrow, and poverty, and disorder, and distress on every side.

In the city of Philadelphia, the city treasurer lately published in the various papers the names of all the whiskey-dealers in the city who were licensed, calling on them, by this public advertisement, to come to his office and take out and pay for their licenses for the coming year. And, on carefully counting them, the writer found there were five thousand and ninety-three (5093) licensed grogshops in the city; and the police say, that in addition to these there are some three thousand (3,000) more selling without license, making, in all, some eight thousand (8,000) whiskey-shops in the city—a number which, allowing fifteen feet front to each shop, would stretch in a single unbroken line nearly twenty-four miles!

Some time ago, Barnum, the great showman, was in Philadelphia, and being a strong temperance man, he made an address on the subject to a large meeting of citizens. And in the course of it, speaking of the immense waste caused by intoxicating drinks, he is reported to have said, "If they would give him the money spent in Philadelphia in intoxicating drinks, he would engage to pay all the city taxes, all the expenses of the police and courts and prisons, all the cost of keeping the streets in repair and of lighting the city lamps, all the expense of sustaining the schools and churches of the city, and would give to every man, woman and child in the city two new suits of clothes every year, and that he would make money by doing it!" To which an intelligent city official said, "There is no question but that he would not only make money, but he would grow rich by doing it!"

Let thinking men ponder these facts and statements; let them see what one upright, intelligent, inflexible judge can do, and what vast good prohibition can do when fairly tried; and let them ask whether the "hard times" do not come, to a large extent, from the waste and evils of intoxicating drinks, and whether the traffic should not be utterly suppressed by law!—*Illustrated Christian Weekly.*

BOY SMOKERS.

It is no secret that many of the most eminent physicians at home and abroad have come to look with very serious apprehension upon the tobacco habit, in the form it now so often takes, of excessive not to say constant, smoking. One need not be a medical practitioner in order to know that generally a habit which, held properly in check, might be a comparatively harmless luxury, may, through excess, become a danger and a curse. Dr. Benjamin W. Richardson, of London, well known as a medical specialist of high rank, in the course of a recent paper on "Nervous Diseases from Tobacco," sums up his estimate of the sanitary effect of tobacco, as used by his own countrymen, as follows: "Put down the smokers of Great Britain at a million in numbers—there are more than that, but let it pass. Why should there exist, perpetually, a million of Englishmen, not one of whom can at any moment be writ down as in perfect health from day to day? Why should a million of men be living with stomachs that only partially digest, hearts that labor unnaturally and blood that is not fully oxidized? * * * The question admits of but one answer—the existence of such a million of imperfectly working living organisms is a national absurdity."

But whatever may be the ultimate verdict of the physiologists as to the effect of the tobacco habit on the average adult man, there is absolutely no room for debate, and probably no difference of opinion, in respect to its evil results when indulged by growing boys. Without an exception every medical writer of any eminence, who expresses himself at all on the subject, gives warning against the use of tobacco in any form by those of immature years; and common observation sufficiently confirms what the faculty proclaim. Dr. Richardson, in the paper already quoted from, remarks that the effects of tobacco "are especially injurious in the young who are still in the stage of adolescence. In these the habit of smoking causes impairment of growth, premature manhood and physical prostration. * * * If a community of youths of both sexes, whose progenitors were finely formed, and powerful, were to be trained to the early practice of smoking, and if marriage were to be confined to the smokers, an apparently new and a physically inferior race of men and women would be bred." Investigations carried on, under Government supervision, among boys attending the polytechnic schools of Paris, have discovered a clearly defined line between the smokers and the non-smokers—the latter being decidedly superior to the former in general scholarship, in quickness of apprehension and in mental force. The poisonous nicotine which constitutes the active principle of common tobacco, and which in a confirmed adult smoker is met and to some extent neutralized by the natural resisting forces of the matured human system, lays hold of the forming nerve tissues of the young and does its mischievous work unimpeded. Stunted growth, flabby flesh, pasty complexion, shambling gait, fickle appetite, dull comprehension, lack of interest in things and premature ripeness, like that of a diseased apple, are among the signs of injury carried about by thousands of American boy-smokers who are striving to show themselves men by proving themselves—very foolish children. That the practice of smoking is fast increasing among the boys of towns and cities, and that the age at which the habit is taken up is rapidly approaching the nursery, if not the cradle, cannot be doubtful to one who walks the streets—and especially the alleys—with his eyes open.—*Philadelphia Times.*

LIGHTNING.

The safest situation during a thunder-storm is in the midst of a wood, particularly if the neighborhood of the tallest trees be avoided. In such a place of shelter the traveller may take refuge in full assurance that he will there be effectually shielded from harm. The greatest risk of injury from lightning is undoubtedly incurred by persons travelling across a wide and very flat plain, because in such a situation they are the only elevated objects. To lessen the risk, which may here be somewhat serious, advantage should be taken of whatever undulations of surface may exist to keep upon the lowest ground. No doubt the prostrate position would in these circumstances afford greater security than the erect.

It happens not unfrequently that animals are killed by lightning under a tree to which they had betaken themselves for shelter. In these cases the tree is struck partly in consequence of its isolation and partly on account of the presence of the animals beneath it. Usually there are several and often many of them assembled together, huddled probably by terror into contact one with another. The air, heated by their bodies, rises above them laden with moisture, derived mainly from their breath. Who has not noticed the cloud of vapor that in the early morning and in certain states of the weather hangs over a flock of sheep or a herd of kine? The column of moist air, ascending through the branches of the tree toward the cloud, offers, in consequence of the comparatively high conductivity of water, a favorable passage for the electricity. A herd of cattle under a tree is thus exposed to a double risk. Also it is evident that in the open country they are less secure from injury than human beings, who cannot affect the atmosphere in a like degree.

The danger from lightning in a dwelling house is exceedingly small. The materials used in buildings are, with the sole exception of the metals, very bad conductors, and the form of a house is not that which is favorable to the reception of an electric charge. Towers and spires, the latter especially, possess that form; but these structures are nearly always protected by conductors affixed to them. It has been suggested that chimneys may, through the conductivity of their soot lining, attract lightning. But, as communication with moist earth is interrupted below the fire-place, the influence of the soot in diminishing the total resistance is compensated. A house around the roof of which there is a system of water-pipes reaching to the ground is very effectually protected. The timid may put their fears to rest by affixing a conductor to the highest chimney and burying the lower end sufficiently deep in the ground to be always in moist earth.

The risk of personal injury from lightning is necessarily small. The conditions favorable to the occurrence of accidents are few, and of such a nature that the combinations requisite for their fulfilment cannot often taken place. There are but two situations in which danger is to be apprehended—namely, on the portions of a flat district that are destitute of trees, and beneath the branches of an isolated tree standing in a spot that is not dominated at a short distance by higher ground. But even here the danger is not necessarily certain, for thunder clouds do not by any means invariably discharge to the ground.—*Harper's Weekly.*

OPTICAL EFFECTS OF INTENSE HEAT AND LIGHT.

The following facts have lately come under my observation at the rolling mills at this place:

While looking at the eclipse of the sun July 29th, I handed the glass to one of the mill "heaters." He at once told me he could see as well with the naked eye as with the smoked glass. I then tried another "heater," and he at once repeated the same statement. I then went to the rolling mill and tested every "heater" at his furnace. They all told the same story. I hunted up every "heater" in the town except two (who were not found), over twenty in all, and every one declared he could see the phenomenon, and all its phases, as well or better with the eye unshaded. I took the precaution to test each one by himself, told him nothing of what I expected, or of the testimony of others. I made no suggestions to any of them, but let each tell his own story. All told the same tale; one peculiarity all agreed to—the image in the glass was upside down from what they saw with the naked eye. They would describe many peculiarities of color which could not be seen by others with the aid of the glass. It should be remembered that the "heater" has to see his iron in the furnace while it is enveloped in a flame whose intense glare prevents unskilled eyes from seeing anything, an education of the eye peculiar to this class of workers, as no other class of workmen is exposed to the same degree of heat or light.

I noticed as soon as the eclipse had progressed some time that I became nervous. I observed the same fact in many others about me. My wife at home did not think of the phenomenon at first, but became so nervous that she had to rush out of doors; she then saw the eclipse for the first time. I found this nervousness more in women than among men, chiefly in persons of debilitated frame, such as convalescents. Is this magnetic?

In accordance with your request, I repeated the experiment of Ericsson, and submitted a spherical piece of iron, eight inches in diameter, to a heat of over 3,000° Fah. It was carried to an almost melting point, withdrawn from the flame and placed on a stand. It had the appearance of a disk at all distances tried, up to over 100 feet. As seen by Mr. Hughes, the chief engineer of the mill (one of the most scientific men in his line in the West), myself and others, it was perfectly flat. The convexity did not appear; it was, while in this state, to all appearance no longer a sphere, but a disk. As the iron cooled off, it resumed its original appearance of a sphere. Our mill men were much surprised by this phenomenon which they had been seeing all their lives, but till now had never observed.—*Joshua Thorne, M.D., in the Kansas City Review.*

A NEW ELASTIC GUM.—A rival to India rubber and gutta-percha has been found in a new elastic gum which has been named Balata. This is the milky sap of the bully-tree that flourishes on the banks of the Orinoco and the Amazon in South America. The operation of winning the gum is similar in every respect to that employed with caoutchouc and gutta-percha. It resembles gutta-percha so closely in its general properties that much of it is shipped from Guiana and sold yearly for gutta-percha, although it has many points of superiority. It is tasteless, gives an agreeable odor on being warmed, may be cut like gutta-percha, is tough and leathery, is remarkably flexible and far more elastic than gutta-percha. It becomes soft, and may be joined piece to piece, like gutta-percha, at about 120 degrees Fahrenheit, but requires 270 degrees Fahrenheit before melting (higher than gutta-percha). It is completely soluble in benzole and carbon disulphide in the cold. Turpentine dissolves it with the application of heat, while it is only partly soluble in anhydrous alcohol and ether. It becomes strongly electrified by friction, and is a better insulator of heat and electricity than gutta-percha, on which account it may find considerable application for electric and telegraphic uses. Caustic alkalies and concentrated hydrochloric acid do not attack it; but concentrated sulphuric and nitric acids attack it as they do gutta-percha, which it closely resembles in all other properties.—*Polytechnic Review.*

EFFECT OF GASLIGHT ON THE EYES.—The German Minister of Instruction has recently issued a report on the influence of gaslight on the eye. The conclusion arrived at in this report—the result of frequent conferences with well-known physicians—is that no evil results follow a moderate use of gas, if the direct action of the yellow flame on the eye is prevented. For this purpose screens or shades are employed. Very grave objections, however, exist to the use of zinc or lead shades, most evils affecting the eye being traceable to them. Their use, it is said, inevitably tends to blindness or inflammation, and other harmful effects. The milky-white glass shade is the best, as it distributes the light, and has a grateful effect on the eye. The burner should not be too close to the head, as congestions of the forehead and headaches result from the radiated heat. The glass plate below the gas, employed in some places, is especially useful for the purpose, as it causes an equal distribution of the light,—necessary where a number are working at one burner,—prevents the radiation of heat, and tends to a steady illumination by shielding the flames from currents of air. In cases of highly-inflamed eyes, dark blue globes can be very beneficially employed. With precautions of this kind, no evil effects from the burning of gas need be feared.—*Boston Journal of Chemistry.*

THE SEEDS of the *Lycopodium clavatum*, or club moss, are so fine that they appear as a yellow powder, and repel water so powerfully that a person may thrust his hand below the surface of water that has been well sprinkled with it without wetting his hand. This property renders it useful as a preventive of chafing in infants, and as a coating for pills to prevent their sticking to each other. It has another curious property: if a teaspoonful of it be placed in a saucer, the flame of a common match will not light it; it appears to be as incombustible as table salt; but if a small quantity of it be placed in a short paper tube and blown over the flame of a candle in a cloud, it will burn with a flash like gunpowder, affording a good illustration of the dangerous explosive that is formed when carbonaceous dust is mingled with a certain proportion of air; and shows the necessity of reliable means for the removal of such dust from flour mills, and other manufactories where it is liable to accumulate. There seems to be good ground for supposing the recent terrible explosion and burning of the flour mills at Minneapolis, Minn., were due to the presence of mill dust.—*Scientific American.*

AN UNEXPECTED friend to man has been discovered in a kind of animalculæ engendered by sewage, which prevents the decomposing matter from becoming a dangerous nuisance. Mr. Angell, the public analyst for Hampshire, having examined the sewage-polluted fluid in Southampton water, has discovered that where the suspended matters are thickest there is going on a silent destruction of the foul matters, through the agency of millions of the minute creatures, by some held to be of animal, but by Mr. Angell believed to be of vegetable origin. On examining the muddy fluid through a microscope, it was found to contain myriads of little brown organisms, surrounded with a gelatinous substance. Each specimen was found to be active in its movements and of peculiar shape, being furnished with a belt of cilia round the centre of the body, and with a long transparent and very flexible tail. After death, these tiny atoms give off an odor similiar to that of sea-weed, and change to a green color. During life they evolve bubbles of oxygen gas, which serve to purify the water from the effects of the decomposing matter on which they themselves feed. It is a pity, however, that man, by polluting rivers with sewage, should stand so much in need of this self-developed scavenger.

LOCKPORT, N. Y., is trying the experiment of heating buildings by wholesale. According to a local paper, a large school building, the largest hall in the town, with other rooms in the same building, and forty large dwellings, are all heated by steam made in a single boiler five feet by sixteen in size, and beside this two steam engines, one of them more than half a mile from the boiler house, are run by steam from the same boiler. About three miles of street mains have been laid, extending through fifteen streets and supplied with steam at a pressure of thirty pounds to the inch. The total space warmed by this single boiler is more than one million cubic feet. The originator of this system claims to have proved that a district of four square miles can be economically warmed from one central point. Steam thus applied may be used for warming, cooking and laundry purposes, running of steam-engines, and the extinguishment of fires. Great reduction of expense, avoidance of inconveniences and danger from fire, are some of the advantages claimed for the new system.—*Watchman.*

THE STATEMENT has been made by a Sheffield (England) physician that the fork-grinders' employment is probably more fatal to human life than any other pursuit in England. According to this authority there are generally from eight to ten individuals at work in the room in which this industry is carried on; and the dust which is created, composed of fine particles of stone and metal—the grinding being always performed on dry stone—rises in clouds, and pervades the atmosphere to which the operatives are confined. The dust, which is thus every moment inhaled, gradually undermines the vigor of the constitution, and produces permanent disease of the lungs, accompanied by difficulty of breathing, cough, and a wasting of the animal frame, often at the early age of twenty-five; and the average longevity of fork-grinders is found not to exceed thirty years.

OATMEAL, CRACKED WHEAT and similar boiled breakfast dishes often become more or less indigestible from being "bolted" in the usual Yankee style. They are soft and "go down" easily, and are shovelled or spooned into the stomach, with no delay in the mouth *en route*. They need mastication as really as beefsteak does—not to save one from choking (which many people seem to suppose is the sole reason for chewing), but to mix thoroughly with saliva, which is a digestive agent, and not a mere lubricant to expedite the passage of dry food down the œsophagus.—*Boston Journal of Chemistry.*

DR. LORING, in discussing before the New York County Medical Society the serious question, "Is the human eye gradually changing its form under the influence of modern civilization?" confirms the opinion, so far at least as short-sightedness is concerned. Constant study, now incidental to the lives of so many, has, he says, a tendency to engender this derangement of the eye, and it is often transmitted to descendants. In his opinion, near-sightedness is a disease of childhood.

DR. CASSELLS, a distinguished aural surgeon of Glasgow, Scotland, lately read a paper describing numerous cases of ear disease, traceable to sewer gas, which had poisoned the air of houses in which the patients resided. He believes this sort of poison to be a very frequent cause of deafness.

THE RUSSIAN BAPTISTS who have been three years in prison at Odessa, for promulgating their faith, have been recently tried and acquitted, to the great joy of the spectators at the trial. The Attorney-General had demanded their exile for three years to the mines of Siberia.

DOMESTIC.

TO CURE MILDEW.—Wet in rainwater: rub the spots with soap and chalk; lay in the sun and dew two or three days and nights. The spot should be thoroughly rubbed with the soap and chalk once or twice each day.

MACARONI SOUP.—Boil a couple ounces of maccaroni (broken up in convenient pieces) in a pint of stock free from grease, to which add a good pinch of salt. When cooked (ten or fifteen minutes), drain them and put them in the soup tureen containing one quart of well-flavored clear stock, boiling hot. Grated Parmesan to be handed round at the table.

THE GOOD QUALITIES OF BROWN BREAD.—Good brown bread supplies in itself the nourishing properties of many kinds of food. It contains albumen fibrine, gluten, and phosphate of lime; it makes bone, muscle, blood, and tissue. The wandering Arab lives almost entirely upon such bread, with a few dates as a relish—and this not because meat is scarce in his part of the world, but because he feels no need for it.

LIGHT PASTE FOR TARTS.—Beat the white of an egg to a strong froth; then mix it with as much water as will make three-quarters of a pound of fine flour into a stiff paste; roll it very thin, then lay the third part of half a pound of butter upon it in little bits; dredge it with some flour left out at first, and roll it up tight. Roll it out again, and put the same proportion of butter; and so proceed till all be worked up.

ADULTERATED BREAD.—The well-to-do, who patronize fancy bread at fancy prices, are treated to as much adulteration in their flour as the poor; their breakfast-rolls are whitened with alum, which is an astringent, hindering the digestion. The rich, however, have only themselves to blame if their bread is not pure wheaten; for pure wheat yields a grayish loaf, and, if whiteness and sponginess be insisted upon, they can be obtained only at the expense of quality.

SURPRISE PUDDING.—One cup not quite full of sugar; two cups of flour; four eggs; two full teaspoons of baking powder; a little salt and fresh lemon. Break the eggs in an earthen dish without beating; pour over these the sugar; sift in the flour and baking powder; first stir and then beat all well for ten minutes. Bake in well-buttered oval tin, in pretty quick oven (it ought to bake in twenty minutes). Eat with cream or any sauce preferred.

POTATO PUDDING.—Eight potatoes; one fourth of a pound butter; one gill of milk; four eggs (well beaten); flour enough to make a stiff batter; a little salt. Be sure to mash the potatoes through a colander to make smooth; flour the inside of a pudding-bag, allowing three inches for the batter to swell; boil incessantly two hours; plunge the bag for a moment in cold water before turning out the pudding. Serve with maple syrup, or sauce, as preferred.

MAKING COFFEE.—The art of making good coffee consists in observing one or two things. First of all, it should be freshly ground; the next thing is to draw out the full strength and aroma, and at the same time preserve the fluid perfectly clear and free from grounds. On the continent it is boiled for a short time, but in England it is usually soaked in water kept as near boiling-point as possible. The French are generally allowed to be the best coffee-makers in the world, and they allow one ounce of coffee to each coffee cupful of water. Two pots are used in the making. Into one boiling water is poured on the ground coffee, and allowed to remain 4 or 5 minutes, when it is poured off as clear as possible. The grounds are then boiled with the remaining water for two or three minutes and both lots mixed together. A shred of saffron or a little vanilla, is often added, and to make the grounds settle, half a cupful of cold water is sprinkled over the decoction; this descends to the bottom, carrying the grounds with it. Coffee may be clarified also by adding a shred of isinglass or add the white of an egg. The great fault of English coffee-making is the failure to draw out the full strength, and this arises in most households from the use of the water, which has not reached the boiling point, or the too great haste with which the infusion is made.—*Cassell's Dictionary.*

JACK THE CONQUEROR;

Or, Difficulties Overcome.

BY MRS. C. E. BOWEN.

(From Children's Friend.)

CHAPTER III.—*(Continued.)*

"Why, that will be quite grand payment," said Jenny, "though I'd have done your job without, as soon as not. However, it won't hurt you to gather me a few cresses now and then; and as for the sticks—'twill make me feel almost like a lady to have them brought to my hand every day, and my poor old back will be thankful for a holiday. Bring the clothes to me this afternoon; here's plenty of cloth to make a good job. I see they are the very same bits I cut off when I made them. But what's the matter, child? Why do you look so miserable like, all of a sudden?" For Jack's face had suddenly changed from its bright, sunny look to one clouded with dismay. What should he do whilst his clothes were being mended? He had no others to supply their place. Another difficulty! He told Jenny his trouble, but the cheerful body bade him take courage; they would manage. "I'll stitch away all the quicker," said she; "you'll just come and sit down with me in your shirt while I do the trousers; it will not be the first time I've had a little boy to care for; and Jenny heaved a sigh to the memory of the blue-eyed lad about Jack's age whom she had buried beside her father more than thirty years ago.

But Jack did not notice the sigh; he was thinking that matters grew worse and worse. He was obliged to confess to Jenny that that plan would not do, for the simple reason that he had no shirt to sit in.

"No shirt! and does your aunt let you go about with nought under these rags?" exclaimed she, indignantly; "poor as she is, she might do better for you than that. However, I won't be going on to make you discontented with her, and we'll contrive: you shall just pop yourself into my bed whilst I work; 'twill cheer me on to see your merry face peeping out."

"Difficulty the *second* conquered," thought Jack, as he ran home to dinner; "but I do wish I had shirts like other boys."

CHAPTER IV.

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"Payment beforehand with you, I see," said the old woman, smiling. "Now then, off with the trousers, child, and into the bed; there's not a minute to lose if I'm to have them finished to-day."

Jack did not find lying in bed quite so agreeable a way of spending an afternoon as lolling on his back in the sunshine, or climbing trees to peep into squirrels' and birds' nests. However, it was some amusement to watch Jenny cutting the pieces of cloth and fitting them to the holes in the trousers. She was dexterous and quick with her needle, and he was amazed to see how respectable an appearance they were beginning to assume in her hands. But five o'clock came, which was her time for tea, and they were not finished.

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Jenny went to bed later than usual that night. She sat thinking for some time after she had spelt out her verse or two in the Bible, and then she busied herself over the contents of a square deal box. She was generally asleep by eleven o'clock, but that hour found her still at her needle, and it was nearly twelve when she laid aside her work, and sought the pillow on which little Jack's head had been lying all the afternoon.

By twelve o'clock next day the boy's suit was finished—mended as well and thoroughly as possible. Patches abounded, of course, but there were no holes, and a little brushing and sponging had done wonders towards a better appearance. Jack capered about with delight, and thanked Jenny again and again.

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ing himself under a large overhanging stone; it fell upon him, and he was found lifeless. His mother bore her grief with a calmness proportioned to its great depth. Her neighbors believed her stunned, and then, seeing the calmness continue, they thought how well she had got over her trouble. But they did not know that in some minds grief can never find utterance, and such was the case with Jenny's. She nursed hers silently, but far too tenderly for her own happiness. Even when many years had fled, when old age advanced, and when the memory of her dead boy might be supposed to be weak and faded, he was still remembered with undiminished love, and his little possessions were treasured in the deal box, from force of habit, which had almost grown into an affection in itself. Those two checked shirts he had worn up to the day of his death, so now it can be better understood why we called it "a sacrifice of feeling," when she made up her mind to give them to Jack.

(To be Continued.)

The Family Circle.

COMFORT

BY CAROLINE MAY.

"Casting all your care upon Him: for He careth for you."—I PETER 5: 7.

He cares for thee, He cares for thee,
Then why these blinding tears,
This aching heart so overfilled
With palpitating fears?

Why grieve because He wills that thou,
Bereft, forsaken, lone,
Should miss for aye their sheltering love
That once was all thine own?

Or why cast down because thy plans,
Thy purposes for good,
Fail of the ends thou dost desire,
Or are misprized, withstood?

He cares for thee, He will not scorn
Thy unsuccessful plans;
Each pure, unselfish aim He sees,
Each secret motive scans.

He cares for thee; He will not fail
Himself to mark the way
Thy feet must take; or point the task
Thy hands must do to-day.

He cares for thee; He will not leave
The heart that trusts in Him,
To desolation and despair,
Along life's shadows dim.

Marvel it is, that He should care,
For in thee there is nought
That could attract the Holy One,
Or claim His tender thought.

No claim—but that He came to save,
And therefore came to cheer,
The saddest and most sinful soul
Of all that sojourn here.

Then cast on Him each grief, each care,
And think not one too small
To roll upon His sovereign love
That weighs and measures all.

—*N. Y. Observer.*

THE GIRL WHO SAVED THE GENERAL.

BY CHARLES H. WOODMAN.

Far down the Carolina coast lies the lovely island of St. John, where stood, one hundred years ago, a noble brick-built mansion, with lofty portico and broad piazza. Ancient live-oaks, trembling aspens, and great sycamores, lifted a bower over it to keep off the sun. Creeping their way through the orange-trees and beds of flowers, spacious walks played hide-and-seek around the house, coming suddenly full upon the river, or running out of sight in the deep woods.

The owner of this place was Robert Gibbes. With his beautiful young wife he kept an open hall, and drew to its doors many of the great and noble people of the times; for he was wealthy and cultured, and she had such charming manners that people loved her very presence. The great house was full at all seasons. Eight children had already come to this good couple, and seven little adopted cousins were their playmates—the orphan children of Mrs. Fenwick, sister to Mrs. Gibbes. He himself was a cripple, and could not walk.

But in those troublous times it could not always remain "peaceful." In the spring of 1779, the British took possession of all the seaboard. General Prevost marched up from Savannah and laid siege to Charleston. Hearing that General Lincoln was hastening on with his army, he struck his tents in the night, and was retreating rapidly toward Savannah. He crossed the Stono Ferry, and fortified himself

JACK IN BED WAITING FOR HIS SUIT.

on John's Island, as the island of St. John's was often called.

For weeks now the noise of musketry and heavy guns destroyed the quiet joy at "Peaceful Retreat." The children, in the midst of play, would hear the dreadful booming, and suddenly grow still and pale. The eldest daughter, Mary Anne, was a sprightly, courageous girl of thirteen. She had the care of all the little ones, for her mother's hands were full, in managing the great estate and caring for her husband. The children never played now in the park, unless Mary was with them; and when the frightful noise came through the trees, they ran to her as chickens to a mother's wing.

After a time, the enemy determined to take possession of this beautiful place. A body of British and Hessians quietly captured the landing one midnight, and creeping stealthily onward, filled the park and surrounded the house. At day-break, the inmates found themselves prisoners.

John's Island was less than thirty miles from Charleston, and when the American officers in the city heard that "Peaceful Retreat" had been captured by the British, they determined to rescue it from the enemy. Two large galleys were immediately manned and equipped and sent to the plantation, with strict orders not to fire upon the mansion.

Sailing noiselessly up the Stono River, at dead of night, the vessels anchored abreast the plantation. Suddenly, out of the thick darkness burst a flame and roar, and the shot came crashing through the British encampment.

Mrs. Gibbes was in great distress. She knew not, at first, whether it was an attack by friends on the camp, or an assault on the house by the enemy. She ordered the servants to cease their wailing and dress themselves. Then her husband and the children were prepared; and, while the cannon bellowed in quick succession and the noise around the house grew louder, the father and mother consulted what was best to do. It was now evident that the attack was by their own friends, and its object was to dislodge the enemy. But Mr Gibbes did not know that the house would not be fired on, and he advised instant flight. He was carried to his chair, and the whole household sallied forth from a back door.

No one was sufficiently protected from the rain. Little Mary had the hardest part, for nearly all the children were in her care. The mud was deep. Some of the little ones could walk but a short distance at a time, and had to be carried—Mary having always one, sometimes two, in her arms. Several of the servants were near her, but none of them seemed to notice her or her burdens. The last horse had been carried off that very day: there was no escape but on foot.

Suddenly, a ball came crashing by them through the trees! Then a charge of grape-shot cut the boughs overhead. They were exactly in the range of the guns! It was evident they had taken the worst direction, but there was no help for it now—it was too late to turn back. In her agony, the mother cried aloud on God to protect her family. Mary hugged closer the child in her arms, and trembled so she could hardly keep up. The Americans were pouring their fire into these woods, thinking the enemy would seek refuge there. The wretched fugitives expected every moment to be the last. On they pushed through mud and rain and screaming shot.

Soon they found they were getting more out of range of the guns. They began to hope; yet now and then a ball tore up the trees around them, or rolled fearfully across their path. They reached one of the houses where their field-hands lived, with no one hurt; they were over a mile from the mansion, and out of range. The negroes said no shot had come that way. Unable to flee further, the family determined to stop here. As soon as they entered, Mrs. Gibbes felt her strength leaving her, and sank upon a low bed. Chilled to the bone, drenched, trembling with terror and exhaustion, the family gathered around her. She opened her eyes and looked about. She sprang up wildly.

"Oh, Mary!" she cried, "where is John?"

The little girl turned pale, and moaned: "Oh, mother! mother! *he's left!*" She broke into crying. The negroes, quickly sympathetic, began to wring their hands and wail.

"Silence!" said Mr. Gibbes, with stern but trembling voice. The tears were in his own eyes. The little child now missing was very dear to them all, and, moreover, was deemed a sacred charge, as he was one of the orphan children of Mr. Gibes's sister, intrusted to him on her death-bed.

The wailing ceased; there was silence, broken only by sobs, and the master asked:

"Who is willing to go back for the child?"

No one spoke. Mr. Gibbes turned to his wife for counsel. As the two talked in low tones, Mrs. Gibbes called her husband's attention to Mary, who was kneeling with clasped hands, in prayer, at the foot of the bed. In a moment, the little maid rose and came to them, saying, calmly:

"Mother, I must go back after baby."

"Oh, my child," cried the mother in agony, "I *cannot* let you!"

"But, mother, I must," pleaded Mary. "God will care for me"

It was a fearful responsibility. The guns yet roared constantly through the darkness: the house might now be in flames; it might be filled with carnage and blood. Mrs. Gibbes turned to her husband. His face was buried in his hands. Plainly, she must decide it herself. With streaming eyes, she looked at Mary.

"Come here, my child," she called through her sobs. Mary fell upon her mother's neck. One long, passionate embrace, in which all a mother's love and devotion were poured out, and the clinging arms were opened without a word. Mary sprang up, kissed her father's forehead, and sped forth on her dangerous mission of love.

The rain had now ceased, but the night was still dark and full of terrors, for through the trees she saw the frequent flashes of the great guns. The woods were filled with the booming echoes, so that cannon seemed to be on every hand. She flew on with all speed. Soon she heard the crashing trees ahead, and knew that in a moment she would be once more face to face with death. She did not falter. Now she was again in the fierce whirlwind! All around her the shot howled and shrieked. On every side branches fell crashing to the earth. A cannon-ball plunged into the ground close beside her, cast over her a heap of mud, and threw her down. She sprang up and pressed on with redoubled vigor. Not even *that* ball could make her turn back.

She reached the house. She ran to the room where the little child usually slept. The bed was empty! Distracted, she flew from chamber to chamber. Suddenly she remembered that this night he had been given to another nurse. Up into the third story she hurried, and, as she pushed open the door, the little fellow, sitting up in bed, cooed to her and put out his hands.

With the tears raining down her cheeks, Mary wrapped the babe warmly and started down the stairs. Out into the darkness once more; onward with her precious burden, through cannon roar through shot and shell! Three times she passed through this iron storm. The balls still swept the forest; the terrific booming filled the air.

With the child pressed tightly to her brave young heart, she fled on. She neither stumbled nor fell. The shot threw the dirt in her face, and showered the twigs upon her head. But she was not struck. In safety she reached the hut, and fell exhausted across the threshold.

And the little boy thus saved by a girl's brave devotion, afterward became General Fenwick famous in the war of 1821.—*St. Nicholas.*

A TOUCHING INCIDENT.

"Nearly all the ornaments in this room have a story attached to them," I said to a friend, as she was admiring an exquisite little bust of Charles Dickens that stood on top of one of the book-cases in my library.

"One sunny day last autumn, a little Italian boy came along to my door, with a basket of plaster-of-Paris wares on his head.

"They were very pretty, and the children almost went wild over them, as country children always do over any unusual display.

"'You have no bust of Dickens?' I said to the little fellow, after I had looked over the articles, and had bought a lovely vase.

"'Deekens?' he said, in his funny broken English, looking puzzled at first; but presently a smile broke over his fair, bronzed young face as he went on. 'Deekens *busto*—write stories—Little Nell—no.'

"Then pointing out of the window, he said, 'Snow come—I bring him not then. Snow all go away, I come again; then I bring Deekens, lady.'

"We were preparing grapes for preserving, and when Minnie gave him a nice large bunch which, running out into the garden, she had picked from the trellis purposely for him, and I had given him a few pleasant words, the gratification he showed was touching to see.

"'*Le sono infinitamente obligato*'—as we might say, 'I am ever so much obliged to you'—he said, the tears glistening in his shining black eyes. 'God bless ladees!' he continued, bowing and smiling, and turning around to bow again as he passed out of the yard.

"We spoke of him several times during the winter, and planned, idly, as we then thought, where our prospective bust of the great story-teller should be placed.

"One pleasant morning in May, as I was assisting John in getting my flower-beds ready for the bulbs and seeds, I heard the latch in the dooryard-gate rattle, and, turning around, saw another Plaster-of-Paris vendor coming up the walk, smiling pleasantly as he placed his long tray of busts and vases upon the ground.

"My thoughts immediately flew to the little Italian boy who had called the autumn previous, and seemed so grateful for the bunch of grapes my sister had given him, and had promised us to bring the bust of Dickens.

"But this young Italian man was not the same person; although he resembled him very much, he was a good deal older.

"'I haf bring ze bust of Dickens to ze lady,' he said, bowing as I approached him.

"'But you are not the one who was to bring it?'

"'No, no, lady,' he replied, very sadly; 'he vas my brodder. He now in heafen. He died, it vas so cold. But he say many times, some day ze cold snow go away, and I sal carry ze busto of Deekens to ze lady where ze grapes grow. But he died, and I haf come to carry it.'

"'How did you find the place?' we asked, as we brushed away the tears we could not suppress at the touching little recital.

"Oh, he told me, my brodder, to come by ze church wiz ze clock, and ze yellow house, and I sall come to ze house wiz many grape-vines—one in ze apple tree, wiz ze seat under it.'

"'How much shall I pay you for the Dickens?' I asked, as I handed the bust to my sister and started to go for my portmonnaie.

"Notting, notting; you speak so kind to my little brodder, and she,' pointing to my sister, "did gif him ze sweet grapes, and he vas so tired and so homesick—and he come here not again—oh, I sal now go!" And the poor Italian, with the tears streaming down his olive cheek, hurriedly turned away.

"Before we could speak a word of comfort to him he had replaced the tray upon his head, and trudged along alone with his grief."—*A. A. Preston, in Youth's Companion.*

REMARKABLE ECHOES.

In the sepulchre of Metella, the wife of Sulla, in the Roman Campagna, there is an echo which repeats five times, in five different keys, and will also give back with distinctness a hexameter line which requires two and a half seconds to utter it. On the banks of the Naha, between Bingen and Coblentz, an echo repeats seventeen times. The speaker may scarcely be heard, and yet the responses are loud and distinct, sometimes appearing to approach, at other times to come from a great distance. Echoes equally beautiful and romantic are to be heard in our own islands. In the cemetery of the Abercorn family at Paisley, when the door of the chapel is shut, the reverberations are equal to the sound of thunder. If a single note of music is breathed the tone ascends gradually with a multitude of echoes till it dies in soft and bewitching murmurs. In this chapel is interred Margery, the daughter of Bruce, and the wife of William Wallace. The echo at the Eagle's Nest, on the banks of Killarney, is renowned for its effective repetition of a bugle call, which seems to be repeated by a hundred instruments, until it gradually dies away in the air. At the report of a cannon the loudest thunder reverberates from the rock, and dies in seemingly endless peals along the distant mountains. At the Castle of Simonetta, a nobleman's seat about two miles from Milan, a surprising echo is produced between the two wings of the building. The report of a pistol is repeated by this echo sixty-times; and Addison, who visited the place on a somewhat foggy day, when the air was unfavorable to the experiment, county fifty-six repetitions. At first they were very quick, but the intervals were greater in proportion as the sound decayed. It is asserted that the sound of one musical instrument in this place resembles a great number of instruments playing in concert. This echo is occasioned by the existence of two parallel walls of considerable length, between which the wave of sound is reverberated from one to the other until it is entirely spent.—*The World of Wonders.*

PLANS FOR WINTER READING.

It is not wise, in laying out literary plans, to make them so cumbrous as to invite failure. It is better to plan little and do more, than to propose much and accomplish less. Very commonly an ambitious reader resolves to abandon everything else for history, and to go through Knight's History of England, or Guizot's France, or Gibbon's Decline and Fall, from cover to cover. Or, very likely, he draws up a still more elaborate scheme, in which the history of some country is to be supplemented by collateral reading concerning its social customs, literature, art, religion, and geography. By December his zeal becomes cool, and in January his scheme is likely to be abandoned entirely. He has meanwhile derived some profit, and increased his store of mental ammunition to a certain extent. But the effect of a failure of this sort is not likely to be stimulating or salutary. Much harm may be done by courses of reading, or by a too strict adherence to a list of books which one thinks he ought to read. A good appetite and an enthusiastic spirit are as essential to sound literature digestion as to physical health. For children and young persons, of course, certain directions concerning a choice of books are absolutely necessary; but even before them it is not advisable to set a whole library of twenty or

thirty books to be "gone through with" in turn.

A good beginning in reading may easily be made. Take one book: a trustworthy popular history, a good biography of some noted person, or a readable account of some interesting country or region. Read it through carefully, with a suitable examination of kindred subjects. Above all, make it a matter of conversation in the home circle. By such conversation the reader will doubtless learn much himself; for few persons are so stupid as to be unable to impart some sort of knowledge. And as each member of the family circle talks of the book, his words both instruct others and strengthen himself. Who has not seen wise fools who simply absorb knowledge, but can neither impart nor use it. Again, let the reader, while engaged on one book, forget his deficiencies in other branches of knowledge, and be content to learn a single thing at a time. Thus a literary atmosphere in the home circle may be created. A subject which really interests adult readers, is sure to interest children as well; for young people know more than they sometimes get credit for. One book, well read and well discussed, is sure to stimulate further efforts; and it is surprising to see how soon it will be of advantage in daily life.—*S. S. Times.*

WOODEN-SHOE MAKERS.

Let us describe a party of wooden-shoe makers, or as they are termed, sabotiers, at work near a clear stream. The whole family is together; the father with his son and son-in-law, the apprentices, the mother and children running about in the beds of cress. Under the trees rises a hut of planks, where all sleep; not far off the two mules which carry the belongings of the encampment are tethered. They are birds of passage, traversing the forest, and sojourning where the wood is cheap. In this green oak be several fine beech-trees are marked for the axe; they are fifty feet high and three feet in girth. Each will probably give six dozen pairs of wooden shoes. Other kinds of wood are spongy and soon penetrated with damp; but the beech sabots are light, of a close grain, and keep the feet dry in spite of snow and mud; and in this respect are greatly superior to leather. All is animation. The men cut down the tree; the trunk is sawn into lengths, and if the pieces prove too large, they are divided into quarters. The first workman fashions the sabot roughly with a hatchet, taking care to give the bend for right and left; the second takes it in hand, pierces the holes for the interior, and scoops the wood out with an instrument called the cuiller. The third is the artist of the company; it is his work to finish and polish it; carving a rose or primrose upon the top, if it be for the fair sex. Sometimes he cuts an open border round the edge, so that the blue or white stocking may be shown by a coquettish girl. As they are finished they are placed in rows under the white shavings, twice a week the apprentice exposes them to a fire which smokes and hardens the wood, giving it a warm, golden brown hue. The largest sizes are cut from the lowest part of the bole, to cover the workman's feet who is out in rain from morning to night. The middle part is for the busy house-wife who is treading the wash-house, the dairy, or stands beside the village fountain. Next come those of the little shepherd who wanders all day long with his flock, and still smaller ones for the school-boy. Those for the babies have the happiest lot, they are seldom worn out. As the foot grows, the mother keeps the little sabots in a corner of her cupboard beside the baptismal robe. Long after when the child has become great and his chair is vacant by the hearth, they are drawn out to be looked at sometimes with a smile, but often with tears. During all his toil the workman talks and sings; he is not taciturn, like the charcoal-burner; his muscles continually in action, his work in the open air, keep him in good temper, and give him refreshing sleep and appetite. He sings like a linnet, while the women chatter and mend the family garments. When the trees have been all cut up, the camp is raised, the mules are loaded, adieu to the green hollow, and another place is sought for. Thus all the year long, whether the forest be tinted with pale spring verdure or covered with the yellow autumn leaves, in some corner will be heard the workers, busy as bees in a hive, gayly carrying on their simple, healthy forest-life.—*Chambers' Journal.*

QUEEN VICTORIA AND HER FAMILY.

The picture on our fourth and fifth pages represents Queen Victoria surrounded by her numerous children and their families, making up such a family picture as all her loyal subjects must feel proud of, beautifully representing, and calling to mind, as it does, the fact that such a Queen should be at the head of the nation in which the home is so revered and sacredly guarded. We also give above a key to the engraving, showing the manner in which each member of the family may be distinguished. The thirty-eighth on the list is Princess Alice of England, the second daughter and third child of the Queen, who was born April 25th, 1843, at the Windsor Castle. She was married to Prince Frederick William Louis, now Louis, Grand Duke of Hesse, in 1862 and died from diphtheria on the 14th of December of the year which has just closed. She had rendered herself very dear to the English people before her marriage, which was solemnized in a very quiet manner six months after her father's death—which, strange to say, occurred on the same day of the year—on account of which it had been postponed. The last on the list is the Princess's little daughter, who died but a short time before her mother from the same terrible disease, the whole family being prostrate with it at the same time.

A Methodist lady in Chicago lately leased property for a beer-garden among the fine residences about Twenty-second street and Cottage Grove avenue. The effect has been large indignation meetings, a revival of the Citizens' Anti-Liquor League, and a citation to the lady to appear and answer for her offense before her Church Board.

Question Corner.—No. 1.

Answers to these questions should be sent in as soon as possible and addressed Editor Northern Messenger. It is not necessary to write out the question, give merely the number of the question and the answer. In writing letters always give clearly the name of the place where you live and the initials of the province in which it is situated

BIBLE QUESTIONS.

1. Who beheld a vision in the valley of dry bones?
2. Who buried Saul's body after he had committed suicide?
3. Who said "To obey is better than sacrifice, and to hearken than the fat of rams?"
4. Where is to be found the declaration, man looketh at the outward appearance, but God looketh at the heart?"
5. Who built Tadmor (Palmyra) in the desert?
6. What prophet acted the part of a physician by giving a medical prescription?
7. Which of the prophets was called from the plow?
8. Who were the bride and groom of the first bridal procession that entered the land of Canaan?
9. Who built a monument in the middle of a river, in what river was it built, and why?
10. What was Belshazzar's last official act?
11. Who was Belshazzar's successor as king of the Chaldeans?
12. What commander refused to lead his army to battle unless a prophetess accompanied him?

SCRIPTURAL ACROSTIC.

1. Was an apostle of the Gentiles.
2. Was a Syriac term of reproach.
3. Are what the heathens worship.
4. Is an emblem of innocence.
5. Was a priest and ready scribe in the law of God.
6. Was one of the sons of Jacob.
7. Is a tree and its fruits.
8. Was one of the sons of Aaron.
9. Is a place for depositing the dead.
10. Is used for protecting fields or gardens.
11. Is a precious gum.
12. Is a large and powerful bird of prey.
13. Easy to be broken.
14. Was a king of Israel.
15. Is a part which is left.
16. Was one of the prophets.
17. Was a king of Persia.
18. Was one of the prophets.
19. Was a seaport city in the island of Crete.
20. Merchandise.
21. Was the wife of one of the patriarchs.
22. Inconstant.
23. A city on the shore of the Sea of Galilee
24. Was a celebrated mountain in Palestine.
25. Was a prophet of the kingdom of Judah.
26. Was one who received the ark and his prosperity in consequence.
27. A celebrated river in Egypt.

The initials form a proverb; the finals, a city on the island of Crete, a city of Lycaonia, an island in the Mediterranean Sea, a city situated about forty miles from Jerusalem, and a city in Italy.

ANSWERS TO BIBLE QUESTIONS IN NO. 23.

193. Benaiah, 1 Chron. xi. 23.
194. Jacob, Gen. xxxii. 9.
195. Daniel, Dan. ix. 21.
196. Shishak, King of Egypt, 1 Kings xiv. 26.
197. Hannah, 1 Sam. ii. 19.
198. Abraham, Gen. xv. 1.
199. Nebuchadnezzar, 2 Kings xxv. 1, 11.
200. Daniel, Dan. vi. 10.
201. One hundred and forty years job, xiii. 16
202. Nebuchadnezzar, Dan. iv. 37.
203. Builders of the wall of Jerusalem Neh iv. 16, 18.
204. Cyrus, Ezra i. 7.

ANSWER TO SCRIPTURAL ACROSTIC.

1, Redeemer, Emmanuel, Jesus. 2, Obadiah, Isaiah. 3, Cornelius. 4, Elymas. 5, Esther. 6, Vashti. 7, Enoch. 8, Reuben. 9, Moses. 10, Omega 11, Rebecca. 12 Eve. "Rejoice evermore."

CORRECT ANSWERS RECEIVED.

To No. 22.—James Rose, 12 *a*; M. Graham, 12 *a*; W. M. McMillan, 12 *a*; Annie Donaldson, 12 *a*; Francis Hooker, 12 *a*; Margaret Patton, 11 *a*; Mary Patton 11 *a*; Anna A. B., 12 *a*; Alice L. Goodspeed, 11; Eli Stout, 10; D. Morton, 12 *a*; William Torrance, 11, H. Paton, 9; Gussie Kelly, 8; Thos. Wiley, 11; Agnes McCarney, 11 *a*.

N.B.—The *a* after some of names signifies that the acrostic has also been answered correctly

SCHOLARS' NOTES.

(From the International Lessons for 1877, by Edwin W. Rice, as issued by American Sunday-School Union.

LESSON I.

JANUARY 5.)

THE SECOND TEMPLE. (About 536-535 B. C.

READ EZRA 3: 1-13. COMMIT TO MEMORY VS. 10-13.

1. And when the seventh month was come, and the children of Is'-ra-el were in the cities, the people gathered themselves together as one man to Je-ru'-sa-lem.

2. Then stood up Jesh'-u-a the son of Joz'-a-dak, and his brethren the priests, and Ze-rub'-ba-bel the son of She-al'-ti-el, and his brethren, and builded the altar of the God of Is-ra'-el, to offer burnt offerings thereon, as it is written in the law of Mo'-ses the man of God.

3. And they set the altar upon his bases; for fear was upon them because of the people of those countries: and they offered burnt offerings thereon unto the Lord, even burnt offerings morning and evening.

4. They kept also the feast of tabernacles, as it is written, and offered the daily burnt offerings by number, according to the custom, as the duty of every day required;

5. And afterwards offered the continual burnt offering, both of the new moons, and of all the set feasts of the Lord that were consecrated, and of every one that willingly offered a freewill offering unto the Lord.

6. From the first day of the seventh month began they to offer burnt offerings unto the Lord. But the foundation of the temple of the Lord was not yet laid.

7. They gave money also unto the masons, and to the carpenters; and meat, and drink, and oil, unto them of Zi'-don, and to them of Tyre, to bring cedar trees from Leb'-a-non to the sea of Jop'-pa, according to the grant that they had of Cy'-rus king of Per'-sia.

8. Now in the second year of their coming unto the house of God at Je-ru'-sa-lem, in the second month, began Ze-rub'-ba-bel the son of She-al'-ti-el, and Jesh'-u-a the son of Joz'-a-dak, and the remnant of their brethren the priests and the Le'-vites, and all they that were come out of the captivity unto Je-ru'-sa-lem: and appointed the Le'-vites, from twenty years old and upward to set forward the work of the house of the Lord.

9. Then stood Jesh'-u-a with his sons and his brethren, Kad'-mi-el and his sons, the sons of Ju'-dah, together, to set forward the workmen in the house of God; the sons of Hen'-a-dad, with their sons and their brethren the Le'-vites.

☞ 10. And when the builders laid the foundation of the temple of the Lord, they set the priests in their apparel with trumpets, and the Le'-vites the sons of A'-saph with cymbals, to praise the Lord, after the ordinance of Da'-vid king of Is'-ra-el.

☞ 11. And they sang together by course in praising and giving thanks unto the Lord; because he is good, for his mercy endureth forever toward Is'-ra-el. And all the people shouted with a great shout, when they praised the Lord, because the foundation of the house of the Lord was laid.

☞ 12. But many of the priests and Le'-vites and chief of the fathers, who were ancient men, that had seen the first house, when the foundation of this house was laid before their eyes, wept with a loud voice; and many shouted aloud for joy.

☞ 13. So that the people could not discern the noise of the shout of joy from the noise of the weeping of the people, for the people shouted with a loud shout, and the noise was heard afar off.

GOLDEN TEXT.

And all the people shouted with a great shout, when they praised the Lord, because the foundation of the house of the Lord was laid.—Ezra 3: 11.

—:o:—

CENTRAL TRUTH.

Revival is from God.

DAILY READINGS.—*M.*—Deut. 12: 1-14. *T.*—Numb. 28: 1-10. *W.*—1 Chron. 29: 1-9. *Th.*—2 Chron. 2: 1-18. *F.*—1 Cor. 3: 11-23. *Sa.*—1 Chron. 16: 7-36. *S.*—Ps. 137: 1-9.

CONNECTED HISTORY.—Our former studies in the Old Testament ended with the decree of Cyrus, 536 B. C., authorizing the Jews, in captivity, to return to Jerusalem. This decree is recorded in the last chapter of Second Chronicles, and also in the first chapter of Ezra. Cyrus restored the sacred vessels which Nebuchadnezzar had carried off from Jerusalem, and instructed the governors (or pashas) of the provinces to aid the Jews. Many of the chosen people remained in Babylon; but 42,360 of them, attended by 7,337 servants, returned to their native land. Zerubbabel was at their head. He was accompanied by the high-priest, Jeshua, and possibly by the prophets Haggai and Zechariah. In the seventh month after their return the great Altar of Burnt-Offering was rebuilt on its ancient site, and the priests and Levites offered burnt-offerings and sacrifices. With this our lessons begin.

NOTES ON PERSONS AND PLACES.—*Jesh'-u-a—Jehovah the Salvation*, the high-priest who returned to Jerusalem with Zerubbabel, and co-operated with him in restoring the sacred services, and rebuilding the temple. He was the son of Jehozadak, Jozadak, or Josedech, who was carried into captivity by Nebuchadnezzar. *Zerub'-ba-bel—born in Babylon.* He was the governor of the province under the Persian rule, Neh. 12. *Zi'-don*, called in the New Testament Sidon, a city of Phenicia, on the Mediterranean Coast, 120 miles north of Jerusalem: called the first born of Canaan, Gen. 10: 15; mentioned 32 times in Scripture: now has 10,000 inhabitants. *Tyre*, a city of Phenicia, 21 miles south of Zidon; famous for its Tyrian dyes and commerce; now a place of 5,000 inhabitants. *Leb'-a-non*, a mountain range in Northern Palestine. *Jop'-pa*, a city 120 miles S.S.W. of Tyre; the seaport of Jerusalem, which is 30 miles to the south-east; first mentioned as Japho, Josh. 19: 46; now Yafa, having a population of 8,000. *Jesh'-u-a*, not the high-priest who bore the same name, but the head of one of the two Levitical houses which had returned. Ezra 2: 40. *Kad'-mi-el*, the head of the other Levitical house, Ezra 2: 40. *A'-saph*, a Levite musician in the time of David, 1 Chron. 6: 39. His name appears in the title of Psalms 50, and 73 to 83.

EXPLANATIONS AND QUESTIONS.

LESSON TOPICS.—(I.) THE ALTAR REBUILT. (II.) THE SACRIFICE RENEWED. (III.) THE TEMPLE BEGUN.

I. THE ALTAR REBUILT. (1.) SEVENTH MONTH, the Hebrew month Tisri, corresponding to the latter part of September and the early part of October; the Hebrew year began about the time of the vernal equinox. (2.) THE ALTAR, the great altar of burnt offering, which stood in front of the temple porch; MOSES, THE MAN OF GOD, this honorable title is given five times to Moses, Deut. 33: 1; Josh. 14: 6; 1 Chron. 23: 14; 2 Chron. 30: 16; Ezra 3: 2; it is also applied three times to David, 2 Chron. 8: 14; Neh. 12: 24, 36, and once to the prophet Shemiah, 1 Kings 12: 22. (3.) HIS BASES, the old foundation of the altar; BURNT OFFERINGS, animals slain, and burnt upon the altar. The rules for such offerings are given in Lev. 1.

I QUESTIONS.—With what did our former studies in the Old Testament end? (See Connected History.) How long had God's people been in captivity? Where? Give an account of the decree for their restoration. How many went up to Jerusalem? Under whose leadership? In what month did they assemble at Jerusalem? State what you know of Jeshua. Of Zerubbabel. Describe the altar of burnt-offering. The sacrifices offered. State the directions given by Moses concerning the altar (Daily Readings for Monday). The Daily Sacrifices offered (Tuesday's Reading).

II. THE SACRIFICE RENEWED. (4.) FEAST OF TABERNACLES, the third of the great festivals of the Hebrews (the others being the Passover and Pentecost), held on the 15th day of the seventh month, and lasting seven days. It was a harvest festival, called also the "feast of ingathering." (5.) NEW MOONS, the month began with the new moon, and the occasion was celebrated with religious rites. (6.) FROM THE FIRST DAY, not waiting until the feast of tabernacles, on the 15th.

II QUESTIONS.—Describe the feast of tabernacles. The other two great national festivals. The various kinds of burnt-offerings. An example of cheerful giving (Wednesday's Reading.) The building of the temple by Solomon.

III. THE TEMPLE BEGUN. (7.) MEAT, food; OIL, olive oil, which is used for many purposes. (8.) LEVITES, there were 74 of them, Ezra 2: 40; TWENTY YEARS OLD, before David's time the age for service was 30 years, 1 Chron. 23: 3, 24. (8.) TOGETHER, as one man; HENADAD, probably the head of another Levite family. (10.) THEIR APPAREL, official robes, Ex. 31: 10; 39: 27. (11.) BY COURSE, alternately, or responsively, perhaps using the 118th Psalm. (12.) ANCIENT MEN, old people. The temple was destroyed by Nebuchadnezzar 588 B.C. only 52 years before this, and hence some could remember how it looked. Comp. Hagg. 2: 3; Zech. 4: 10. (13.) COULD NOT DISCERN, etc. Eastern people are very demonstrative in expressing feelings, both of joy and sorrow.

III. QUESTIONS.—What persons assisted preparing material for the temple? From what place was it brought, and how? Who superintended the work? Describe the musical service. The feelings of the old men. How was the second house inferior? In what respect would it be superior?

What facts in this lesson teach us—

(1.) That God's special blessings should be specially recognized?

(2.) That all may have a part in building up the house of God?

(3.) That it is fitting to rejoice in God's work?

(4.) That the better times for the Church are in the future, not in the past?

LESSON II.

JANUARY 12.)

THE DEDICATION. [About 515 B.C.]

READ EZRA 6: 14-22. COMMIT TO MEMORY V. 19-22.

14. And the elders of the Jews builded, and they prospered through the prophesying of Hag'-ga-i the prophet and Zech-a-ri'-ah the son of Id'-do. And they builded, and finished it, according to the commandment of the God of Is'-ra-el, and according to the commandment of Cy'-rus, and Da-ri'-us, and Ar-tax-erx'-es king of Persia.

15. And this house was finished on the third day of the month A'-dar, which was in the sixth year of the reign of Da-ri'-us the king.

16. And the children of Is'-ra-el, the priests, and the Le'-vites, and the rest of the children of the captivity, kept the dedication of this house of God with joy.

17. And offered at the dedication of this house of God a hundred bullocks, two hundred rams, four hundred lambs; and for a sin offering for all Is'-ra-el, twelve he goats, according to the number of the tribes of Is'-ra-el.

18. And they set the priests in their divisions, and the Le'-vites in their courses, for the service of God, which is at Je-ru'-sa-lem; as it is written in the book of Mo'-ses.

☞ 19. And the children of the captivity kept the passover upon the fourteenth day of the first month.

☞ 20. For the priests and the Le'-vites were purified together, all of them were pure, and killed the passover for all the children of the captivity, and for their brethren the priests, and for themselves.

☞ 21. And the children of Is'-ra-el, which were come again out of captivity, and all such as had separated themselves unto them from the filthiness of the heathen of the land, to seek the Lord God of Is'-ra-el, did eat.

☞ 22. And kept the feast of unleavened bread seven days with joy: for the Lord had made them joyful, and turned the heart of the king of As-syr'-i-a unto them, to strengthen their hands in the work of the house of God, the God of Is'-ra-el.

GOLDEN TEXT.

The glory of this latter house shall be greater than of the former, saith the Lord of hosts: and in this place will I give peace, saith the Lord of hosts.—Hag. 2: 9.

—:o:—

CENTRAL TRUTH.

Holy joy comes through hearty consecration.

DAILY READINGS.—*M.*—1 Kings 6: 2-14. *T.*—2 Chron. 7: 4-11. *W.*—2 Chron. 5: 1-14. *Th.*—Exod 12: 1-28. *F.*—Num. 8 5-22. *Sa.*—2 Chron. 30: 21-27. *S.*—1 Kings 5, 1-18.

CONNECTED HISTORY.—The Samaritans (a mixed race partly Israelite and more largely Assyrian, 2 Kings 16: 6) asked the privilege of co-operating in rebuilding the Temple. Being refused, they attempted to stop the work, misrepresented it at the court of Persia, and prevented any further progress during the latter part of the reign of Cyrus, and that of Ahasuerus and Artaxerxes. In the second year of the reign of Darius Hystaspes, B. C. 520, the prophets Haggai and Zechariah, Ezra 5: 1; Hagg. 1: 1-8; Zech. 1; 1-6, roused Zerubbabel and Jeshua to complete the work. The Persian satraps, after inspecting the work, sent a letter to King Darius asking for instructions. At their suggestion Darius caused a search to be made; the original decree of Cyrus, Ezra 1: 1-5, was discovered and Darius ordered that the work proceed. The temple was completed 515 B.C., nearly 21 years after it was begun, 536 B.C. Our lesson gives an account of the dedication.

NOTES.—*Hag'-ga-i*, or Hag'-gai—*festive*, the first prophet after the captivity. He began prophesying about 520 B.C. *Zech-a-ri'-ah—whom Jehovah remembers*, probably born in Babylon. Began prophesying 520 B.C., in concert with Haggai. *Cy'-rus—the sun*, founder of the great Persian empire; son of Cambyses and grandson of Astyages, king of Media; led the Persians in a revolt against the Medes, and overthrew the Median sovereignty; took Babylon, 538 B. C., and reigned over an empire which included Persia, Media, Babylonia, Assyria, Asia Minor, Syria, Egypt, etc.; it extended from the Indus to the Bosphorus and from the Indian Ocean to the Caspian and Black Seas. Herodotus says Cyrus ruled "over all Asia." He was killed in battle with the Scythians, 529 B.C. Isaiah foretold his name and work many years before he came to the kingdom. Is. 44: 28; 45: 1. *Da-ri'-us*, son of Hystaspes; King of Persia 521-486 B. C.; favored the Jews in rebuilding the temple; was defeated by the Greeks in the famous battle of Marathon, 490 B.C. *Ar-tax-erx'-es—mighty warrior*, identified by many with the Pseudo Smerdis, a usurper, who, after a reign of seven months, was put to death; others identify him with Artaxerxes Longimanus. *As-syr'-i-a*, from Asshur, Gen 2: 14; 25: 18; one of the great monarchies of the ancient world, extending from Armenia to Babylon. It was 400 miles long, 150 miles wide, and contained an area of 75,000 square miles. This name is used in Ezra 6: 22, instead of Persia, probably as the more ancient and comprehensive designation of the territory.

(The Psalms supposed to refer to the dedication of the second temple, are: Psalms 48, 81 and 146 to 150.

EXPLANATIONS AND QUESTIONS.

LESSON TOPICS.—(I.) THE TEMPLE COMPLETED. (II.) THE TEMPLE DEDICATED. (III.) THE PASSOVER CELEBRATED.

I. THE TEMPLE COMPLETED. (14.) ELDERS, i.e., the chiefs or leaders—especially Zerubbabel and Jeshua, Ezra 5: 2, 5, 9; PROPHESYING, the promise and prediction of success given by the prophets; HAGGAI, ZECHARIAH, see Notes, and Connected History; COMMANDMENT, decree; CYRUS, DARIUS, see Notes; ARTAXERXES, not the one mentioned in Ezra 4: 7, who opposed the work, but Artaxerxes Longimanus, who, more than 50 years later, assisted it, Ezra 7: 13-20. He is mentioned here in order to group together the principal parties co-operating. Note these four parties, (1) the elders, (2) the prophets, (3) the God of Israel, (4) the three kings. (15.) THE MONTH OF ADAR, this was the twelfth, or last, month of the Jewish year, corresponding nearly with our March and early April.

I. QUESTIONS.—State the request of the Samaritans, (Ezra 4: 1-2). The answer returned. Describe their endeavors to hinder the work of rebuilding the temple. (See Connected History.) State the substance of the letter sent to Artaxerxes, Ezra 4: 11-16. The letter to Darius, Ezra 5: 7-17. State how Darius reiterated the decree of Cyrus, Ezra 6: 1-12. Give an account of the finishing of the first temple. (Daily Reading for Monday.) What prophets are mentioned? (Ezra 6: 14.) State the substance of their prophecies concerning the work. What three kings are mentioned? State what you know about each. When was this second temple finished?

II. THE TEMPLE DEDICATED. (16.) DEDICATION, the setting apart, or consecrating to God and his worship. (17.) AN HUNDRED BULLOCKS, etc., contrast these with the 22,000 oxen and 120,000 sheep at Solomon's dedication, 1 Kings 8: 63; ALL ISRAEL, most of those who returned were of Judah and Benjamin, but there were some representatives of all the twelve tribes, 1 Chron 9: 3; Neh. 7: 7. (18.) DIVISIONS * * * COURSES. The Levites were set apart for the tabernacle service, Num. 3: 6; 8: 9; and David arranged them in orders or courses, 1 Chron. 23: 6-24; 24: 1-19; BOOK OF MOSES, the writings of Moses, and here, especially, the book of Numbers.

II. QUESTIONS.—The meaning of "dedication"? Who united in this dedication? With what spirit? Why joyful? State the number of their offerings. The number at the dedication of Solomon's temple. Why was there such a difference? What were the Levites and priests? The duties of each? Give an account of the dedication of the first temple. (Daily Reading Thursday.) Why do we now dedicate churches?

III. THE PASSOVER CELEBRATED. (19.) PASSOVER, the first of the great festivals of the Hebrews; so called because the Lord passed over the houses of the Israelites in Egypt, Ex. 12: 13, 23-27. With this was connected a "feast of unleavened bread," continuing for seven days, Ex. 13: 6, 7; 23: 15, etc. It was celebrated in the first month of the year, corresponding nearly to our April. (20.) KILLED * * * FOR ALL, etc., as at the great passovers of Hezekiah and Josiah, 2 Chron. 30: 17; 35: 11-14. In later times each head of a family slew the victim for his family. (21.) SEPARATED THEMSELVES, etc., had forsaken idolatry and immorality, and become Jewish proselytes, through the rite of circumcision.

III. QUESTIONS.—What do you know of the passover? Who participated in it? By whom were the animals killed? What did the passover signify? By what people is it now celebrated? Why do not Christians now observe it? (Comp. 1 Cor. 5: 7.) How did Christ fulfil, and abolish, it?

What does this lesson teach concerning—

(1.) The duty of building houses of worship?

(2.) The joy of celebrating religious ordinances? ("Serve the Lord with gladness.")

(3.) The promise and hope to those building the spiritual temple?

(4.) The need of holiness for Christian services?

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